

Browser JavaScript Execution Flow

HTML Parser

Reads HTML and finds <script> tags.

JavaScript Parser

Parses JS and checks syntax.

Compilation (JIT in V8 Engine)

Converts JS to bytecode and then optimized machine code.

Execution Phase

Runs code in Call Stack (Global + Function Execution Contexts).

Web APIs

Handles DOM, fetch, setTimeout, etc. (Async tasks).

Callback Queue

Stores callbacks waiting to be executed.

Event Loop

Moves callbacks to Call Stack when it's empty.

Rendering & Repaint

Updates the UI after execution.